REMARKS

Reconsideration and allowance of the application are respectfully requested. Claims 9-20 and 25-30 were in the application, claims 9-15, 25 and 27-29 have been amended, and new claims 30-40 added.

Claims 9-20 and 27-29 have been amended to provide proper claim dependency. New claims 30-39 have been added to remove the multiple claim dependency so as to overcome the objection to claims 27-29. As several of the new claims depend from withdrawn claims 19 and 20, these claims, specifically claims 35-40 are hereby withdrawn, but would be subject to rejoinder if claim 25 is deemed allowable.

Claim 25 has additionally been amended to include that a vibrator (12) is located in the core, support found on page 8, l. 9-10, and in Fig. 5. The diffusing of the further material into the concrete to provide a sliding transition from the concrete and out into the further material is discussed in Para 0050. The claims has also been amended to clarify that the applicator is used to deliver the further material, and not the concrete as was incorrectly stated in claim 25 previously. A more thorough study of the specification and drawings thus required this revision to claim 25, as more fully discussed below. That the one or more supply openings extend in a longitudinal direction of the core has been returned to a dependent claim as in the broadest embodiment of the invention, comparable to original claim 1. The location and direction of the one or more openings is not considered necessary to distinguish from the prior art, and so the applicant wishes to pursue claim 25 as a generic claim. No new matter is involved in this amendment, and claim 25 remains consistent with the original species restriction requirement.

Claims 25, 26 and 27 were rejected under 35 USC 112, first paragraph as the examiner believed the moving applicator was not originally

disclosed. That is incorrect.

Support is found in the specification as follows:

[0018] An advantageous way of feeding the material of greater density in structure, is by feeding the further material through the inner mould part, the core, while it is displaced into the outer mould part,...

[0025] An apparatus is defined for the performance of the method, where the core, according to the rising core principle, constitutes the applicator. The further material is fed through one or more annular grooves, said grooves extending along the circumference of the core and being arranged at the front end of the core as seen in the direction of travel of the core.

[0037] fig. 5 shows an apparatus for the casting of concrete pipes with an inner layer of greater density in structure, where the applicator in the core is formed by a gap which extends along the circumference, and which is present in the upper end of the core, ...

Abstract with reference to Figure 5:

"A method and an apparatus for the manufacture of concrete pipes (2) made of an outer layer and having an inner layer of greater density in surface structure is described. The inner layer is applied by an applicator in a mould (1) having both outer (3) and inner (4) mould parts. The applicator is formed by an inner mould part or core (4) or by an applicator unit in immediate connection with the core (4). The applicator applies the inner layer simultaneously or immediately following

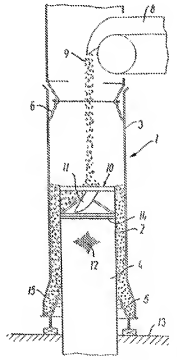

FIG.5

vibration of the concrete forming the pipe. The inner layer is applied during movement of the inner mould part or core (4) in its longitudinal direction, the core having one or more supply openings (14) provided along the circumference of the core (4) at the upper end of the core (4) for supplying a further material of greater density to form the inner layer."

In view of the above, there is more than ample support for the moving applicator of claim 25, particularly where the moving core includes the applicator which comprises a grove or other openings for delivering the further material below the concrete. While Figure 5 does show a rotor mounted on top of the core, this is located above the applicator/openings in the core. A rotor is not required to practice the invention of claim 25. Note also that this is distinct from the Fig. 4 embodiment where the applicator openings are incorporated in the rotor, not the core.

These distinct elements are more easily understood with reference to the specification paragraphs described above and Fig. 5, which also provided the basis for the corrective amendments to claim 25 relative to the applicator.

The written description standard is directed to whether the invention is reasonably conveyed to one skilled in the art. It is submitted that the moving applicator of claim 25 is well supported and would be well understood by the skilled person, who would be familiar initially with the rising core principle, as discussed in the background section of the specification. Such a person could certainly understand the moving applicator of the invention, as it is both discussed in the specification and shown in the drawings. Consequently, the rejection under 35 USC 112 should be withdrawn.

Claims 25, 26 and 30 were rejected as being unpatentable over Kern, U.S. Patent no. 5,051,223 in view of Steiro, U.S. Patent no. 4,039,642 solely, or further in view of Ross, U.S. Patent no. 1,694,563.

Kern was cited as allegedly describing the application of an impregnated layer using nozzles 13 of smoothing cylinder 5, the examiner stating "pressing rolls 6 would provide periodic compression of the cylindrical concrete mass while the prestressing nozzles 13 of smoothing cylinder 5 supply a liquid impregnation material to the damp concrete (vibrating the concrete filling the space between the outer mould part and the core for maintaining the concrete in a fluid phase as the concrete is filling the space while supplying the further material...)".

This is incorrect, as rather than fluidizing the concrete, the rolls and smoothing cylinder assure that the concrete is compacted before application of the liner layer which is why, even using pressure, the liquid only penetrates into the surface for about 10 mm.

The method of Kern thus leads one away from, not towards the fluidization and diffusion steps of the applicants invention. Kern states that the method includes the steps of "introducing a concrete mass into a pipe form to produce a cylindrical mass having an inner wall, compacting the concrete mass by applying pressing rollers to the inner wall, subsequently smoothing the inner wall of the mass, and applying an impregnation medium to the inner wall of the concrete mass under pressure after the concrete mass has been compacted, the inner wall has been partially smoothed and the concrete mass is still damp, the pressure being sufficient to cause the impregnation medium to permeate the concrete mass to a depth of at least 10 mm." (Col. 1, l. 32-43, Emphasis added.)

One skilled in the art would certainly recognize that the compacted and smoothed concrete would be in a substantially solid form, and certainly could not be in a fluidized condition. The rolls only apply pressure, not any vibration, and in any event, the impregnating liquid is not injected till well after the rolls are passed. As stated, at the point of injection, the concrete is

compacted, smoothed and "merely damp" when the application begins, with penetration being quite limited, at least 10 mm, a mere 1 cm.

On the other hand, the applicants invention takes the opposite approach, fluidizing rather than compacting the concrete during the addition, so as to allow the further material to diffuse into the concrete, to integrate the further material with the concrete to provide a sliding transition between the concrete forming the bulk of the pipe on the inside and the further material which forms the surface layer of the pipe, so that there is a full integration and a strong bonding between the concrete and the further material.

In conducting an obviousness analysis, "[a] fact finder should be aware . . . of the distortion caused by hindsight bias and must be cautious of arguments reliant upon ex post reasoning." KSR Int'l Co. v. Teleflex Inc., 127 S.Ct. 1727, 1742, 167 L. Ed. 2d 705 (2007). This is because the genius of invention is often a combination of known elements that in hindsight seems preordained. In re Omeprazole Patent Litig., No. MDL 1291, 490 F. Supp. 2d 381, 2007 U.S. Dist. LEXIS 39670, at 400-01 (S.D.N.Y. May 31, 2007) (citation omitted) (quoting KSR, 127 S.Ct at 1742); see also Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 1138 (Fed. Cir. 1985), Raytheon Co. v. Roper Corp., 724 F.2d 951, 961 (Fed. Cir. 1983) (stating that "virtually every claimed invention is a combination of old elements").

"It is not within the framework of 35 U.S.C. Section 103 to pick and choose from the prior art only so much as will support a holding of obviousness to the exclusion of other parts necessary for a full appreciation of what the prior art teaches or suggests, as hindsight is not the test. In re Wesslau, 353 F.2d 238 (CCPA 1965). The Examiner "cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." In re Fine, 837 F.2d 1071, 1075, 5 U.S.P.Q.2D (BNA) 1596 (Fed. Cir. 1988).

The examiner must guard against reliance on "hindsight", best explained as follows:

> The genius of invention is often a combination of known elements which in hindsight seems preordained. To prevent hindsight invalidation of patent claims, the law requires some "teaching, suggestion or reason" to combine cited references. Gambro Lundia AB v. Baxter Healthcare Corp., 110 F.3d 1573, 1579, 42 U.S.P.Q.2D (BNA) 1378, 1383 (Fed. Cir. 1997). When the art in question is relatively simple, as is the case here, the opportunity to judge by hindsight is particularly tempting. Consequently, the tests of whether to combine references need to be applied rigorously. See In re Dembiczak, 175 F.3d 994, 999, 50 U.S.P.Q.2D (BNA) 1614, 1617 (Fed. Cir. 1999), limited on other grounds by In re Gartside, 203 F.3d 1305, 53 U.S.P.Q.2D (BNA) 1769 (2000) (guarding against falling victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher). McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1351, 60 U.S.P.Q.2D (BNA) 1001, 1008 (Fed. Cir. 2001).

Moreover, to support a conclusion that a claim would have been obvious, it must be established that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded nothing more than predictable results to one of ordinary skill in the art. KSR, at 416-417.

In reviewing the rejection, it is clear that the examiner misunderstood the method of Kern, and certainly attributed functions to Kern where they are not only not found, but rather one skilled in the art is led in the exact opposite direction. Consequently, Kern cannot render claim 25 and the claims depending therefrom obvious.

Steiro similarly was improperly relied on. Steiro was cited as teaching the making of concrete pipe using a longitudinal opening. However, using a longitudinal opening for filling a mold has no relevance to providing longitudinal openings for applying a further material to an inside layer of a concrete pipe during vibration so the concrete is fluidized at the point of

addition. Quite simply, the combination of Kern, a rising core pipe manufacturing process with Steiro, a horizontal fixed core method of manufacture is difficult at best and certainly, there is nothing to teach incorporating the longitudinal openings for applying a further material as is done with the applicants' invention.

The Examiner cited Ross as making it allegedly be obvious to one of skill to use the "raising applicator" of Ross in the process of Kern in order to minimize air entrapment. However, this is incorrect. In Ross, a porous mold is filed with a highly viscous material and vibrated to allow the viscous material to fill out the mold spaces (p. 1, l. 74-77) This has nothing to do with any "raising applicator", but rather with a dispenser. Further, Ross states that the dispenser is maintained at a fixed height and it is the mold that is lowered, while also stating that no such movement is indeed necessary (P. 2, l. 96-105) The purpose is to minimize folds in the highly viscous material.

Even beyond these technical differences, it would also be clear to a person skilled in the art that Kern does not need to be concerned with air entrapment, as concrete is not highly viscous, and the manner in which the rollers progressively compact the concrete would surely force any air out of the concrete. Thus, even if Ross could arguably be combined with Kerns, one is not lead to the applicants invention, rather they are taught at best the benefits of lowering a mold rather than raising a core.

In view of the above, it is clear that claim 25 and the claims depending therefrom are patentable over Kern in view of Steiro or Ross.

Claims 25, 26 and 30 were rejected as being unpatentable over Kern, in view of Steiro and further in view of Hutchinson, U.S. Patent no. 2,356,852 or Ross.

The comments above relative to Kern, Steiro and Ross are equally applicable here.

Hutchinson was cited as disclosing the use of vibration, however, this is not associated with promoting fluidizing to permit diffusion of a further material into concrete for forming a liner having a greater density at an inner surface of the concrete pipe. The combination with Hutchinson does not overcome the deficiencies in the primary and secondary references as discussed above, and claims 25, 26 and 30 are patentable over the cited prior art combination.

Based on the above amendments and remarks, favorable consideration and allowance of the application are respectfully requested. However should the examiner believe that direct contact with the applicant's attorney would advance the prosecution of the application, the examiner is invited to telephone the undersigned at the number given below.

Respectfully submitted,

/WJS/
William J. Sapone
Registration No. 32,518
Attorney for Applicant(s)

Coleman Sudol Sapone P.C.
714 Colorado Avenue
Bridgeport, CT 06605
Telephone No. (203) 366-3560
Facsimile No. (203) 335-6779